ABSTRACT OF THE DISCLOSURE

A quadrature modulator includes a local oscillator oscillating at an oscillation frequency equal to 4/(2N+1) times a carrier frequency where N is a natural number, a frequency conversion block for multiplying the oscillation frequency by a factor of (2N+1)/2, a divider for dividing the multiplied oscillation frequency to output a pair of orthogonal carrier waves, first and second multipliers for modulating the carrier waves with a digital baseband signal, and an adder for adding the modulated carrier waves to output a carrier signal having the carrier frequency. The frequency conversion block includes a divider for dividing the oscillation frequency, N frequency mixers cascaded from one another and a band-pass-filter, which are cascaded in this order.